

INS5001

20-1000MHz 50W Broadband High Power Amplifier

Description

The Model INS5001 is a high power, class AB solid state amplifier which utilizes the latest GaN Technology to offer broadband performance from 20 to 1000MHz. Inspower's ISO9001 quality management system assure consistent performance and highest reliability



Product Features

- 50Ω RF impedance, Fully Integrated Matching
- 50W Output
- Manual Gain Adjustable
- Built-in monitoring functions
- High reliability and ruggedness

Electrical Specifications @ 25°C, 50 Ω System

Symbol	Parameter	Unit	Min.	Typ.	Max.
BW	Operating Frequency	MHz	20		1000
P _{SAT}	Power Output Saturated	Watt	50		
P _{1dB}	Power Output @ P _{1dB}	Watt	30		
G _{1dB}	Power Gain @ P _{1dB} , Adjustable Atten. 0dB	dB		46	
P _{IN}	Input Power for Rated P _{SAT}	dBm		0	3
ΔG _{SS}	Small Signal Gain Flatness	dB			±2.0
MGA	Manual Gain Adjustment Range	dB	20		
S11	Input Return Loss	dB			-10
IP ₃	Third Order Intercept Point 2-Tone@37dBm/Tone, 1MHz Spacing	dBm		+53	
H	Harmonics @Pout=30W	dBc		-35	-20
Spur	Spurious Signal	dBc		-70	-60
V _{AC}	Operation Voltage(1-phase, 50Hz/60Hz)	VAC	100		240
P _D	Power Consumption @Pout=50W	Watt		550	700

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Mechanical Specification

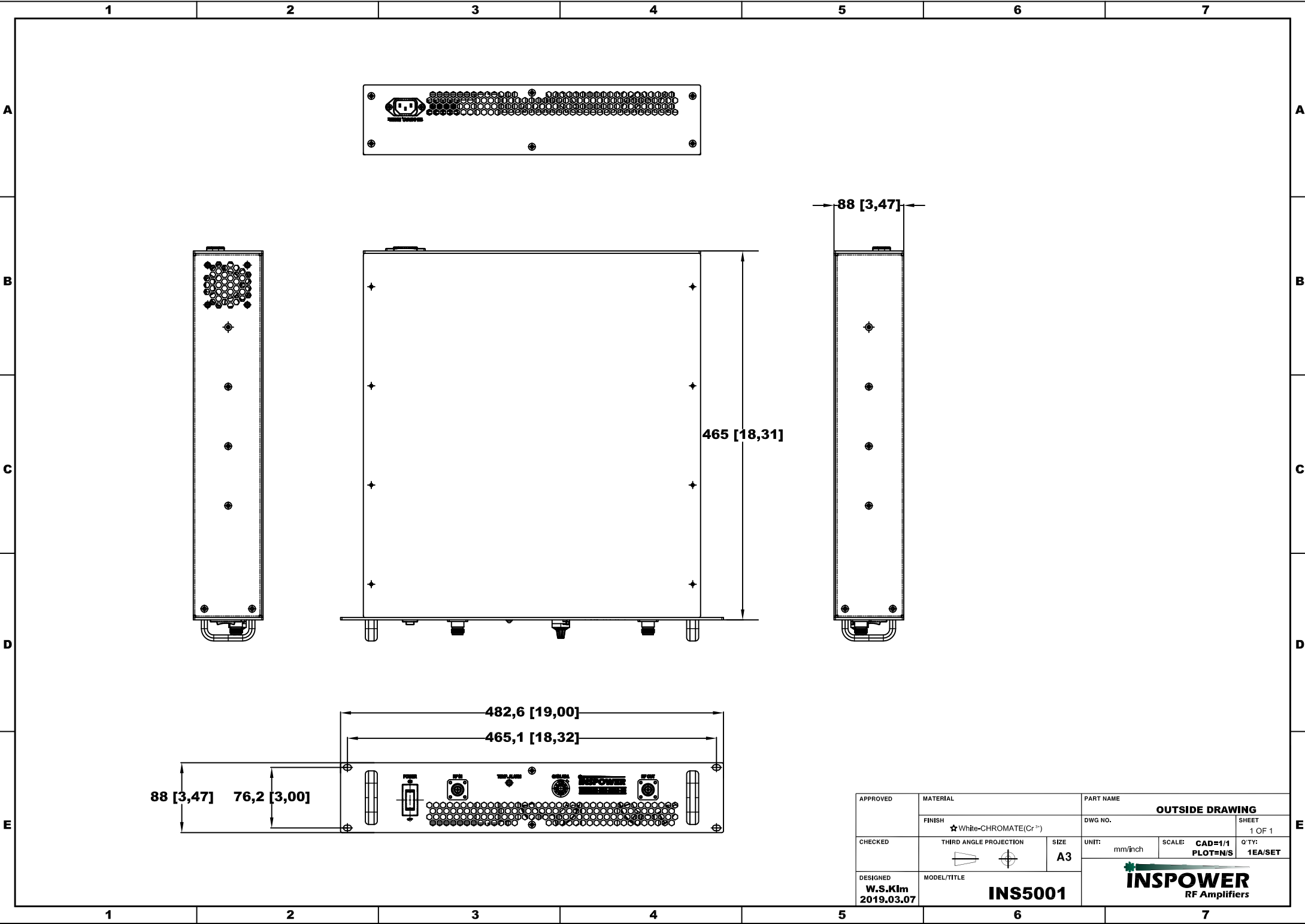
Parameters	Value	Unit
Dimensions (W x H x D) without Handle	18.31 x 3.47 x 19	inch
RF In/Out Connectors	N Female	-
AC Interface Connector	EN60320 C14	-
Weight	24	kg
Cooling(Built in FAN)	Built-in forced air cooling system	

Environmental Characteristics

Parameters	Specifications	Remark
Operating Case Temperature Range	-10°C to +50°C	
Storage Temperature	-40°C to +85°C	
Relative Humidity non-condensing	95%	

Protection

Item	Specifications for Activation	Remark
Input Overdrive	+10dBm Max	
Load VSWR @ POUT = 50W	∞ @ all load phase & amplitude for duration of 1 minute 3:1 @ all load phase & amplitude continuous	
Thermal Shutdown	Above 50°C ambient	



APPROVED	MATERIAL	PART NAME		
	FINISH	OUTSIDE DRAWING		
	★ White-CHROMATE(Cr ³⁺)	DWG NO.	SHEET	
CHECKED	THIRD ANGLE PROJECTION	UNIT:	SCALE:	QTY:
		mm/inch	CAD=1/1 PLOT=N/S	1 OF 1 1EA/SET
DESIGNED	MODEL/TITLE	 INSPOWER RF Amplifiers		
W.S.Klm 2019.03.07	INS5001			